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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,215	12/28/2001	Jarmo Kuusinen	836-010815-US(PAR)	5237

2512 7590 10/03/2005

PERMAN & GREEN
425 POST ROAD
FAIRFIELD, CT 06824

EXAMINER	
YANG, LINA	
ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/036,215	KUUSINEN ET AL.	
	Examiner	Art Unit	
	Lina Yang	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/29/2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/8/02, and 5/30/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351 (a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 3-4, 22-23 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Kilkki et al. (WO 00/25483).

Regarding claims 1 and 27, Kilkki teaches a method of determining a bit rate in a first communication device (MS), the first communication device comprising a protocol stack (inherent for transmission in CDMA communication system, since CDMA system defines a protocol model) for transferring/receiving information to a second communication device (BTS), the protocol stack comprising a protocol layer, the protocol layer providing a logical channel for transferring first information (a request) through said protocol layer, in which method: the first information is transferred through the protocol layer via said logical channel, characterized in that: the bit rate in said logical channel is determined on the basis of second information (transmitted request

along with the length indication) obtainable from said protocol layer (fig. 13A and fig. 13B; page 25 lines 1-12 and lines 21-27).

Regarding claim 3, Kilkki further teaches that the bit rate is determined on the basis of said second information (transmission request), the second information being control information by which the flow of information in said logical channel is controlled ("transmission request" is a control information for the flow in logical channel).

Regarding claim 4, Kilkki further teaches that the bit rate is determined on the basis of second information that is separate with respect to the first information to be transferred to said second communication device, the second information being control information arranged to control the operation of said protocol layer ("transmission request" is a control information for the flow in logical channel).

Regarding claim 22, Kilkki further teaches that the value of the determined bit rate is provided to an application in the first communication device (fig. 13B, the determined bit rate, step 248, is provided to calculating Priority level in step 250).

Regarding claim 23, Kilkki further teaches that the bit rate value provided to an application is used to optimize an information flow produced by the application (fig. 13B priority level for packets is used for optimizing information flows).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in 3the United States.

2. Claims 1-2, 27, 29-31 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Butler et al. (U. S. Patent No. 5,774,496 B1).

Regarding claims 1 and 27, Butler teaches a method of determining a bit rate in a first communication device (transmitter in MS or BS), the first communication device comprising a protocol stack (inherent for transmission in CDMA communication system, since CDMA system defines a protocol model) for transferring/receiving information to a second communication device (receiver in MS or BS), the protocol stack comprising a protocol layer, the protocol layer providing a logical channel for transferring first information (frame with predetermined number of symbols) through said protocol layer, in which method: the first information is transferred through the protocol layer via said logical channel, characterized in that: the bit rate in said logical channel is determined on the basis of second information (received frame along with the symbol) obtainable from said protocol layer (fig. 1; col.1 lines 4-20; col. 2 lines 30-33 and col. 5 lines 11-15).

Regarding claim 2, Butler further teaches that the said second information is selected from the protocol layer, the second information indicating how much first information is transferred through the protocol layer via said logical channel during a

given first period of time (predetermined time period) (notice, the data has been received in the receiver); and the bit rate during the first period of time in the logical channel is determined on the basis of said second information selected from the protocol layer (fig. 1; col.1 lines 4-20; col. 2 lines 30-33 and col. 5 lines 11-15).

Regarding claims 29 and 36, Butler teaches a first communication device (60) (transmitter in MS or BS) comprising a protocol stack (inherent for transmission in CDMA communication system, since CDMA system defines a protocol model) for transferring/receiving information to a second communication device (receiver in MS or BS), the protocol stack comprising a protocol layer (103), the protocol layer being arranged to provide a logical channel (141-144) for transferring first information (frame with predetermined number of symbols) through said protocol layer, the first communication device comprising: a processing element (CPU) (col. 2 lines 37-40) for transferring the first information through the protocol layer (103) via said logical channel, characterized in that the first communication device further comprises: a processing element (CPU, 208) (col. 2 lines 37-40) for determining the bit rate in the logical channel (141-144) on the basis of second information obtainable from said protocol layer (the calculating process has to be done by a CPU).

Regarding claim 30, Butler further teaches that the first communication device comprises: a processing element (CPU) (processor; col. 2 lines 37-40) for selecting said second information from the protocol layer, the second information indicating how much

first information is transferred through the protocol layer via said logical channel during a first period of time (predetermined time period) (notice, the data has been received in the receiver); and a processing element (CPU, 208) (processor; col. 2 lines 37-40) for determining the bit rate in the logical channel during the first period of time on the basis of said second information selected from the protocol layer (fig. 1; col.1 lines 4-20; col. 2 lines 30-33 and col. 5 lines 11-15) (the "selecting" and "determining" processes have to be done by a CPU).

Regarding claim 31, Butler further teaches that the first communication device comprises a processing element (CPU, 208) (processor; col. 2 lines 37-40) for determining the bit rate value in the logical channel repeatedly (the process is inherently repeated every time a bit rate needs to be determined).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 5-15, 17-18, 28 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Butler et al. (U. S. Patent No. 5,774,496 B1) in view of Peisa et al. (U. S. Patent No. 6,850,540 B1).

Regarding claim 5, Butler differs from the claimed invention in that Butler does not specifically teach that a transport format is used to control the first information that flows in the logical channel, and the bit rate is determined on the basis of the transport format in use in said logical channel. However, Peisa teaches that a transport format is used to control the first information that flows in the logical channel, and the bit rate is determined on the basis of the transport format in use in said logical channel (fig. 2 and fig. 3, col. 5 lines 27-32). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a transport format is used to control the first information that flows in the logical channel, and the bit rate is determined on the basis of the transport format in use in said logical channel, as taught by Peisa in the assembly of Butler in order to let RRC to configure the bandwidth (col. 6 lines 66-67 and col. 7 lines 1-20).

Regarding claim 6, Peisa further teaches that the protocol stack is a WCDMA (Wideband Code Division Multiple Access) protocol stack and that the first communication device communicates with said second communication device using the WCDMA protocol stack (col.1 lines 55-63; 3G UMTS is the counterpart of WCDMA, fig. 2 and fig. 3).

Regarding claim 7, Peisa further teaches that the protocol layer through which the first information is transferred via said logical channel is the MAC (Medium Access Control) Layer of the WCDMA protocol stack (fig. 2 and fig. 3).

Regarding claim 8, Peisa further teaches that the first communication device is a wireless terminal of a cellular communication network (UE in fig. 2) and the second communication device is a network element of a cellular communication network (CRNC/SRNC in fig. 2).

Regarding claim 9, Peisa further teaches that the first communication device is a network element of a cellular communication network (CRNC/SRNC in fig. 2) and said second communication device is a wireless terminal of a cellular communication network (UE in fig. 2).

Regarding claim 10, Peisa further teaches that said transport format comprises parameters TBS (Transmission Block Size) and TTI (Transmission Time Interval), and the bit rate in a given logical channel is determined on the basis of the values of said parameters (col.7 lines 8-11).

Regarding claim 11, Peisa further teaches that more than one logical channel passes through said protocol layer and each of said more than one logical channel is identified by a logical channel identifier (fig. 2, col. 4 lines33-47).

Regarding claim 12, Peisa further teaches that the bit rate during a first period of time in a logical channel identified by a logical channel identifier is determined on the basis of parameters TBS and TTI, wherein the value of the parameter TBS determines the amount of data that can be transmitted during a period of time defined by parameter TTI (col. 7 lines 3-11).

Regarding claim 13, Peisa further teaches that the value of parameter TTI determines the length of said first period of time (single transmission time interval, col. 7 lines 3-11).

Regarding claim 14, Peisa further teaches that the second information, on the basis of which the bit rate is determined, is taken from the MAC Layer of the WCDMA protocol stack in response to the transfer of a data block coming from the RLC Layer of the WCDMA protocol stack from a logical channel of the MAC Layer to a transport channel of the Physical Layer of the WCDMA protocol stack in connection with transmission of the data block (fig.2).

Regarding claim 15, Peisa further teaches that the second information, on the basis of which the bit rate is determined, is taken from said protocol layer only once during said first period of time (by default).

Regarding claim 17, Peisa further teaches that the bit rate value in the logical channel is determined repeatedly (the process is inherently repeated every time a bit rate needs to be determined).

Regarding claim 18, Peisa further teaches that the repeatedly determined bit rate value is maintained and updated in a memory available for use by the first communication device (fig. 6).

Regarding claim 28, Butler differs from the claimed invention in that Butler does not specifically teach that the first communication device comprises a WCDMA protocol stack and that said second information, on the basis of which the bit rate is determined, is taken from the MAC Layer of the WCDMA protocol stack. However, Peisa teaches that the first communication device comprises a WCDMA protocol stack (fig. 2 and fig. 3, 3G UMTS is the counterpart of WCDMA) and that said second information, on the basis of which the bit rate is determined, is taken from the MAC Layer of the WCDMA protocol stack (fig. 2 and fig. 3). Therefore, it would have been obvious for one of

ordinary skill in the art at the time when the invention was made to include the first communication device comprises a WCDMA protocol stack and that said second information, on the basis of which the bit rate is determined, is taken from the MAC Layer of the WCDMA protocol stack, as taught by Peisa in the assembly of Butler in order to determine the bit rate.

Regarding claim 32, Butler differs from the claimed invention in that Butler does not specifically teach that the first communication device comprises a database (209) and said repeatedly determined bit rate value is maintained and updated in a memory available for use by the first communication device. However, Peisa teaches that the first communication device comprises a database (209) and said repeatedly determined bit rate value is maintained and updated in a memory available for use by the first communication device (fig. 6). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the first communication device comprises a database (209) and said repeatedly determined bit rate value is maintained and updated in a memory available for use by the first communication device, as taught by Peisa in the assembly of Butler in order to keep the information handy and updated.

4. Claims 24- 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Kilkki et al. (WO 00/25483) in view of Erjanne (U. S. Patent No. 6,490,271 B1).

Regarding claim 24, Kilkki differs from the claimed invention in that Kilkki does not specifically teach that the determined bit rate is provided for another protocol layer in the first communication device. However, Erjanne teaches the logical layers of a radio interface (fig. 6, col. 9 lines 18-47). As well known in the art, the lower layers provide services to the up layers. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the determined bit rate is provided for another protocol layer in the first communication device, as taught by Erjanne in the assembly of Kilkki in order to provide service to the up layers.

Regarding claim 25, Kilkki further teaches that the bit rate value provided to another protocol layer is used to optimize an information flow transmitted by said other protocol layer (fig. 13B priority level for packets is used for optimizing information flows).

5. Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Butler et al. (U. S. Patent No. 5,774,496 B1) in view of Luong (U. S. Patent No. 6,314,150 B1).

Regarding claim 33, Butler teaches that the first communication device comprises a processing element (CPU, 208, 209) (processor; col. 2 lines 37-40) for calculating the bit rate in the logical channel. Butler differs from the claimed invention in that does not specifically teach calculating an average of the bit rate in the logical channel. However, Luong teaches calculating an average bit rate (fig. 3 and col. 7 lines

33-48). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include calculating an average of the bit rate in the logical channel, as taught by Luong in the assembly of Butler in order to get more accurate information.

Regarding claim 34, Luong further teaches that the first communication device comprises a processing element (CPU, 208, 209) for calculating said average as a running average (fig. 3 and col. 7 lines 33-48).

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Butler et al. (U. S. Patent No. 5,774,496 B1) in view of Peisa et al. (U. S. Patent No. 6,850,540 B1), and further teaches that in view of Kim et al. (U. S. Patent Application No. 20050123427).

Regarding claim 16, the modified assembly of Butler and Peisa differs from the claimed invention in that the modified assembly does not specifically teaches the bit rate in said logical channel is determined by means of a mathematical calculation in which the value of parameter TBS is divided by the value of parameter TTI. However, it is well known in the art that the bit rate is calculated by the value of parameter TBS is divided by the value of parameter TTI. For example, Kim teaches that teaches the bit rate in said logical channel is determined by means of a mathematical calculation in which the value of parameter TBS is divided by the value of parameter TTI ([0080]). Therefore, it

would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the bit rate in said logical channel is determined by means of a mathematical calculation in which the value of parameter TBS is divided by the value of parameter TTI, as taught by Kim in the modified assembly of Butler and Peisa in order to get the bit rate.

7. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Butler et al. (U. S. Patent No. 5,774,496 B1) in view of Peisa et al. (U. S. Patent No. 6,850,540 B1), and further teaches that in view of Luong (U. S. Patent No. 6,314,150 B1).

Regarding claim 19, the modified assembly of Butler and Peisa differs from the claimed invention in that the modified assembly does not specifically teaches an average bit rate in said logical channel is calculated. However, Luong teaches to calculating an average bit rate (fig. 3 and col. 7 lines 33-48). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include an average bit rate in said logical channel is calculated, as taught by Luong in the modified assembly of Butler and Peisa in order to get more accurate information.

Regarding claim 20, Luong further teaches that teaches that the average is calculated as a running average (fig. 3 and col. 7 lines 33-48).

Regarding claim 21, Peisa further teaches that the average is maintained and updated in a memory available for use by the first communication device (fig. 6).

8. Claims 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Butler et al. (U. S. Patent No. 5,774,496 B1) in view of Peisa et al. (U. S. Patent No. 6,850,540 B1), and further in view of Erjanne (U. S. Patent No. 6,490,271 B1).

Regarding claim 26, Butler differs from the claimed invention in that Butler does not specifically teach that more than one logical channel passes through said protocol layer and that a PDP (Packet Data Protocol) context uses more than one logical channel for transmitting said first information to said second communication device, in which method: the total bit rate of the PDP context in a given direction (UL/DL) during said period of time is determined by adding the bit rate values of the logical channels in use by the PDP context in said direction. However, Peisa teaches more than one logical channel passes through said protocol layer and more than one logical channel are used for transmitting said first information to said second communication device (fig. 2 and fig. 3), in which method: the total bit rate of the PDP context in a given direction (UL/DL) during said period of time is determined by adding the bit rate values of the logical channels in use in said direction (by default). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include more than one logical channel passes through said protocol layer and more than one logical channel are used for transmitting said first information to said second communication device, in which method: the total bit rate of the PDP context in a given direction

(UL/DL) during said period of time is determined by adding the bit rate values of the logical channels in use in said direction, as taught by Peisa in the assembly of Butler in order to effectively utilize the total bandwidth.

The modified assembly of Butler and Peisa differs from the claimed invention in that modified assembly does not specifically teach that a PDP (Packet Data Protocol) context uses more than one logical channel. However, Erjanne teaches the logical layers of a radio interface (fig. 6, col. 9 lines 18-47). As well known in the art, the lower layers provide services to the up layers, thus the PDP context (the top layer in fig. 6) is using the services provided by all the lower layers (fig. 6). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include more than one logical channel passes through said protocol layer and that a PDP (Packet Data Protocol) context uses more than one logical channel for transmitting said first information to said second communication device, in which method: the total bit rate of the PDP context in a given direction (UL/DL) during said period of time is determined by adding the bit rate values of the logical channels in use by the PDP context in said direction, as taught by Erjanne in the modified assembly of Kilkki and Peisa in order to effectively utilize the total bandwidth.

9. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Butler et al. (U. S. Patent No. 5,774,496 B1) in view of Luong (U. S. Patent No. 6,314,150 B1), and further teaches that in view of Peisa et al. (U. S. Patent No. 6,850,540 B1).

Regarding claim 35, the modified assembly of Butler and Luong differs from the claimed invention in that does not specifically teach that the modified assembly does not specifically teach that the first communication device further teaches that comprises a database (209) for maintaining and updating said average. However, Peisa teaches that a database is used for maintaining and updating information (fig. 6). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include that the first communication device further teaches that comprises a database (209) for maintaining and updating said average, as taught by Peisa in the modified assembly of Butler and Luong in order to keep the information handy and updated.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lina Yang whose telephone number is (571)272-3151. The examiner can normally be reached Monday through Thursday between 8:00 a.m. and 7:00 p.m. eastern standard time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 517-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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